

Risk factors associated with clinic visits during the 1999 forest fires near the Hoopa Valley Indian Reservation, California, USA

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Abstract:

Forest fires burned near the Hoopa Valley Indian Reservation in northern California from late August until early November in 1999. The fires generated particulate matter reaching hazardous levels. We assessed the relationship between patients seeking care for six health conditions and PM(10) exposure levels during the 1999 fires and during the corresponding period in 1998 when there were no fires. Multivariate logistic regression analysis indicated that daily PM(10) levels in 1999 were significant predictors for patients seeking care for asthma, coronary artery disease and headache after controlling for potential risk factors. Stratified multivariate logistic regression models indicated that daily PM(10) levels in 1999 were significant predictors for patients seeking care for circulatory illness among residents of nearby communities and new patients, and for respiratory illness among residents of Hoopa and those of nearby communities.

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Resource Description

Exposure: M

weather or climate related pathway by which climate change affects health

Air Pollution, Extreme Weather Event

Air Pollution: Particulate Matter

Extreme Weather Event: Wildfires

Geographic Feature: M

resource focuses on specific type of geography

Rural

Geographic Location: M

resource focuses on specific location

United States

Health Impact: M

specification of health effect or disease related to climate change exposure

Climate Change and Human Health Literature Portal

Cardiovascular Effect, Diabetes/Obesity, Respiratory Effect, Other Health Impact

Cardiovascular Effect: Other Cardiovascular Effect

Cardiovascular Disease (other): circulatory illness; coronary artery disease

Respiratory Effect: Asthma, Other Respiratory Effect

Respiratory Condition (other): respiratory illness

Other Health Impact: headache

Population of Concern: A focus of content

Population of Concern: M

populations at particular risk or vulnerability to climate change impacts

Children, Racial/Ethnic Subgroup

Other Racial/Ethnic Subgroup: Hoopa Valley Indians

Resource Type: M

format or standard characteristic of resource

Research Article

Timescale: M

time period studied

Time Scale Unspecified